UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,984	09/23/2005	Didier Roziere	0501-1127	6990

466 7590 07/06/2007

YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

EXAMINER	
ZHU, JOHN X	

ART UNIT	PAPER NUMBER
2858	

MAIL DATE	DELIVERY MODE
07/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/526,984	ROZIERE, DIDIER	
	Examiner	Art Unit	
	John Zhu	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *5,6,19* is/are allowed.

6)☒ Claim(s) *1,2,4,7-17 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Specification

3. The disclosure is objected to because of the following informalities: the concept of "linking tracks" in claim 19 is not clearly described in the specification. Furthermore, please use consistent terminology throughout specification. For example, "conducting tracks" on page 9, line 25.

Appropriate correction is required.

Claim Objections

4. Claim 12 is objected to because of the following informalities: "*minimum distance images*" is not clearly understood by the examiner. For the purpose of examination, it would be read as the signal indicating the detected object. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp (5,325,442) in view of Roziere et al. (FR 2,756,048).

With respect to claim 1, Knapp discloses a capacitive proximity sensor comprising at least one detection antenna (Fig. 1, element 10) comprising a plurality of

capacitive proximity sensors each with a single measurement electrode (Fig. 3, elements 14), electronic means for exciting (Fig. 1, element 22) the electrodes and processing (Fig. 1, element 24) signals from the electrodes, and digital means (Fig. 9, computer) for controlling and processing proximity measurements.

Knapp does not disclose the electronic means comprise for each detection antenna, a floating capacitive bridge cooperating with polling means to measure sequentially the respective capacitances between each of the measurement electrode of antenna and the object or body to be measured.

Roziere discloses a floating capacitive bridge (Applicant's spec, page 11, lines 14-23) with polling means (Fig. 6, MUX) that sequentially take the input from the electrodes to be processed.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the floating capacitive bridge with polling means as taught by Roziere into the system of Knapp for the purpose of reducing the effects of parasitic capacitances (Page 1, lines 8-13).

With respect to claim 4, it is noted that features of an apparatus must be recited either structurally or functionally, and claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Since claim 4 recites functional language of measuring, the structure is identical to the structure of claim 1, which is rejected in view of Knapp and Roziere.

With respect to claim 11, Knapp further discloses the electronic means, digital control and calculation means cooperate to deliver proximity detection threshold signals (Fig. 9).

7. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Vranish.

With respect to claims 2 and 9, Knapp and Roziere do not explicitly disclose a single shield for all the measurement electrodes of the antenna arranged to modify the field lines of the electrodes.

Vranish discloses a single shield (Fig. 4c, shield 2) for all the measurement electrodes (sensing elements 12) arranged to modify the field lines of the electrodes.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the single shield as taught by Vranish into the system of Knapp and Roziere for the purpose of insulating the sensing elements for interfering signals.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Coveley (5,952,835).

With respect to claim 7, Knapp and Roziere do not explicitly disclose delivering an alarm signal indicating an inconsistent measurement.

Coveley discloses setting off an alarm when a measurement is deemed to be inconsistent (outside a predetermined threshold, column 4, lines 60-64).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the alarm condition as taught by Coveley into the system of Knapp and Roziere for the purpose of indicating that an object is removed from the sensing plate (Column 4, lines 60-61).

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Stanley et al. (6,703,845 B2).

With respect to claim 8, Knapp and Roziere do not explicitly disclose reference capacitances provided to check the calibration.

Stanley discloses reference capacitances (Column 10, lines 27-28) for checking the calibration of the measuring system.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the reference capacitances as taught by Stanley into the system of Knapp and Roziere for the purpose of allowing the system of continuously compensate for variations in the measurement circuit (Column 10, lines 27-29).

7. Claims 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Lane (5,623,552).

With respect to claims 10 and 14, Knapp g and Roziere do no explicitly disclose the proximity detector is arranged on the outside surface of a box and comprises a plurality of measurement areas equipped with detection antennas. Knapp and Roziere also do not disclose edge antennas arranged in part over one face of cap and in part over another contiguous face.

Lane discloses a proximity sensor with multiple areas of proximity detectors (Fig. 4, detectors 140) arranged on the outside of a box in which edge antennas are arranged in part over one face of cap and in part over another face.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the box structure and edge antennas as taught by Lane into the system of Knapp and Roziere for the purpose of detecting a the presence of a fingerprint.

With respect to claim 12, Knapp further discloses the electronic means and the digital control and calculation means cooperate to deliver output signals of objects detected (Fig. 1, element 24 and Fig. 9).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp, Roziere and Lane as applied to claim 10 above, and further in view of Crawford (US PG Pub no. 2002/0122006).

With respect to claim 13, Knapp, Roziere and Lane disclose all aspects of the claim except for the antennas are arranged on five faces of the box or cap.

Crawford discloses a box antenna with antennas arranged on five faces of the box or cap ("two or more noncoplanar walls", Abstract, lines 1-3).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the antenna system of Knapp to incorporate the plural antennas on walls as taught by Crawford for the purpose of sensing signals for all direction to address the multipath problem of multipath environments (Page 1, paragraph 0005).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Lind (6,225,939 B1).

With respect to claim 15, Knapp and Roziere do not explicitly disclose at least one of the antennas is produced using a flexible circuit.

Lind discloses an impedance sheet which could be used for proximity measurement comprising a flexible dielectric material (Fig. 1, dielectric 20) in between conductors (impedance elements 22).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the flexible sheet as taught by Lind into the system of Knapp and Roziere for the purpose of reliability and endurance as a strong flexible material would not be as easily subjected to breaks and fissures.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of McDonnell et al. (6,348,862 B1).

With respect to claim 16, Knapp and Roziere disclose all aspects of the claim except for at least one of the antennas is connected to the electronic means by flexible connecting means.

McDonnell discloses flexible connecting means (Fig. 3, cable 58) is used to connect the antenna to the electronic means (Fig. 1, sensor circuit).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the flexible connecting means as taught by McDonnell into the system of Knapp and Roziere for the purpose of providing a reliable medium for connecting the antenna and the electronics.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Habraken et al. (5,883,935).

With respect to claim 17, Knapp and Roziere do not explicitly disclose the proximity sensor used in an x-ray machine with a proximity detector arranged on the inside or outside of a cap, with an x-ray antenna comprises a piercing provided for the passage of the x-ray beam.

Habraken discloses a proximity detector with an x-ray machine with detectors formed on the cap (Fig. 1, detector 6) with an x-ray emitter (4) providing an x-ray beam through the piercing (Fig. 2a, circular passage).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the x-ray machine with piercing and proximity detector as taught by Habraken into the system of Knapp and Roziere for the purpose of detecting an object when performing a radiological test.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp and Roziere as applied to claim 1 above, and further in view of Travanty et al. (4,987,583).

With respect to claim 20, Knapp and Roziere do not explicitly disclose a proximity detector arranged on the inside or outside surface of an x-ray emitter device.

Travanty discloses proximity sensors (Fig. 1, pressure sensors 46, 49) on an x-ray emitter device (X-ray source 14).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the proximity sensors as taught by Travanty into the system of Knapp and Roziere for the purpose of detecting a collision between a component and a patient under test in a x-ray apparatus (Abstract, lines 1-4).

Allowable Subject Matter

13. Claims 5, 6 and 19 are allowed.

15. Claim 5 is allowable over the art of record because the prior art does not teach or suggest a detection antenna comprises a test track which in normal operation, is at the potential of a shield and in test mode, is earthed.

Claim 6 is allowable as it depends from claim 5.

Claim 19 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including an x-ray antenna comprising a copper layer being removed over an area which corresponds to the passage of the X-ray beam and in which the linking tracks and the capacitive electrodes are produced from the chromium layer.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 4 and 11 have been considered but are moot in view of the new ground(s) of rejection. Knapp (5,325,442) is introduced to teach the limitation of the "only a signal measurement electrode".

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Zhu whose telephone number is (571) 272-5920. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Zhu
Examiner
Art Unit 2858

JZ

ANJAN DEB
PRIMARY EXAMINER